Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

1. Department of Transportation (DOT)
2. United States Environmental Protection Agency (USEPA) *Comments in the USEPA letter pertaining only to the separate OC Pesticide TMDL, are not included in this response matrix.*
3. Heal the Bay (HTB) *Comments in the HTB letter pertaining only to the separate OC Pesticide TMDL, are not included in this response matrix.*
4. County Sanitation Districts (County)
5. Camrosa Water District, Camarillo Sanitary District, Ventura County Water Works District #1, City of Simi Valley, City of Thousand Oaks (Camrosa)
6. Ventura County Farm Bureau (VCFB) *Comments in the VCFB letter pertaining only to the separate OC Pesticide TMDL, are not included in this response matrix.*

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
1.1	DOT	6/9/05	The draft staff report and the Basin Plan amendment acknowledge assigning load and waste load allocations based on watersheds. The Department owns approximately 85 miles of highway, two maintenance stations, and eight park and ride facilities within the watershed. The approximate area encompassed by these facilities represents less than one percent of the total watershed	Staff agrees that the Department of Transportation controls a small percentage of the watershed.
1.2	DOT	6/9/05	We support efforts to improve water quality in Calleguas Creek, but are concerned with the waste load allocations assigned to the Department. We would like the Board to know that the Department has not used Chlorpyrifos or Diazinon within our right-of-way. Please note that the Department performed a Statewide Monitoring Characterization Study (CTSW-RT-03-065) and found that the listed pesticides were usually at non-detectable levels in storm water discharges. Given the small percentage of the watershed and the minimal amount of pesticides within the Department's runoff, we do not consider ourselves a contributor of Chlorpyrifos or Diazinon to the watershed.	The allocations in this TMDL are concentration based. As such, they can apply to all dischargers.
2.1	USEPA	6/9/05	The proposed TMDLs meet all federal regulatory requirements and will be approvable when they are submitted to the U.S.EPA. We strongly urge the Regional Board to adopt the TMDLs at the July 7, 2005 Board meeting to meet the state adoption requirements under the consent decree (Heal the Bay V. Browner, C. 98-48 25 SBA, March 22, 1999) and to provide greater clarity of implementation requirement expectations for all	Staff agree.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
			concerned stakeholders.	
2.2	USEPA	6/9/05	In particular, the proposal to set 1 TUc (Toxicity Unit Chronic) as the target to explain unknown toxicity is in accordance with 40 CFR 130.2(i).	Staff agree that the target of 1TUc is appropriate for this TMDL.
2.4	USEPA	6/9/05	Furthermore, the implicit and 5% explicit margin of safety outlined for chlorpyrifos in the toxicity TMDL appropriately addresses the uncertainties related to the linkage analysis.	Staff agree that the uncertainty in chlorpyrifos is appropriately addressed by the assigned MOS. See also Staff response to internal MOS memos which precede this response to comments.
2.6	USEPA	6/9/05	U.S. EPA endorses the TMDL implementation plans, which identify reasonable pollutant reduction approaches to implement the applicable water quality objectives and provide for adaptive management opportunities to improve upon current and future management practices.	Staff agree.
4.1	HTB	6/10/05	**Many interim load allocations are not protective of aquatic beneficial uses –** The approach to setting the interim allocations was not protective of aquatic beneficial uses … On a related issue, how far did the RWQCB go back to determine the interim load allocations? The answer to this question is especially critical if the maximum detected concentration was used to determine the load allocation. Data points older than three years should not be used for the default load allocation.	Interim targets were set using current discharge data to insure no increase during the implementation period in chlorpyrifos or diazinon discharged. Data older than three years was used to create a sufficiently large data set. The Implementation Plan has been modified to include that the interim LAs will be reconsidered after five years, based on new monitoring data. Final WLA must be met after two years and no reconsideration of the interim WLA is warranted.
4.2	HTB	6/10/05	**The language in the diazinon/chlorpyrifos TMDL overstates the implicit margin of safety –** As in a number of other Los Angeles region TMDLs, the assessment of the adequacy of the margin of safety is purely subjective. The first bullet in the resolution should	Concentration based TMDLs can be protective even without a MOS. However, the water column and sediment linkage analysis has uncertainty and while the analysis uses conservative assumptions, these assumptions are based on literature values, not values derived in Calleguas Creek. Because the assumptions made were reasonable

No.	Author	Date	Comment	Response
			be deleted because the mere fact that diazinon and chlorpyrifos have been banned for home use is not a margin of safety. It is just a statement of fact. Who knows, perhaps the public and farmers will start using more toxic OP pesticides as an alternative to diazinon and chlorpyrifos. Another overstatement is the language that says that the use of water quality standards for load allocations provides a margin of safety for the TMDL because the derivation of the standard itself includes a margin of safety. This is patently absurd because the TMDL by definition needs to at least achieve water quality standards attainment. The TMDL shouldn't get margin of safety credit for a basic requirement: water quality standards attainment. Although we disagree with the margin of safety provided (we believe that for consistency purposes, all TMDLs including the OC and OP pesticide TMDLs for Calleguas Creek, should have a 10% explicit margin of safety), Heal the Bay strongly supports the inclusion of an explicit margin of safety for chlorpyrifos.	conservative, the MOS is only 5%. See also Staff response to internal MOS memos which follow this response to comments. The first bullet in the Basin Plan amendment concerning residential use has been deleted.
4.3	HTB	6/10/05	**The toxicity approach in the diazinon/chlorpyrifos TMDL does not assure compliance –** Heal the Bay strongly supports the TUc approach to setting WLAs and LAs (one chronic toxicity unit) to meet the narrative toxicity objective in the Basin Plan. … However, the implementation plan and resolution need clarification as to whether these TUc load allocations need to be met within 10 years for LAs and two years for WLAs. The current language strongly implies that exceedance of the load allocations will only trigger a TIE/TRE, but it won't trigger any toxicity reduction implementation efforts. Although identifying the source of toxicity and	The toxicity targets and the number of exceedances that will trigger a TIE will be implemented in accordance with US EPA, State Board and Regional Board resolutions, guidance and policy at the time of permit or waiver issuance or renewal. Source reduction and elimination will be addressed through BMPs and the Special Study to investigate the pesticides which may replace chlorpyrifos and diazinon, including potential control methods.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
			methods to reduce toxicity is commendable, those efforts are meaningless if they don't result in the implementation of source reduction and elimination measures. Also, please clarify in the TMDL what triggers the initiation of a TIE and TRE. Heal the Bay urges the RWQCB to require a stricter threshold than what is often in the Los Angeles-RWQCB's NPDES permits because Calleguas Creek is impaired for toxicity. The fact that the water body is impaired for toxicity means that a stricter regulatory approach is needed to assure water quality standards attainment. As such, the trigger for a TIE should be no more than one exceedance of the 1 TUc load allocation, and no more than two exceedances to trigger a TRE.	
4.4	HTB	6/10/05	**The monitoring program for the diazinon/chlorpyrifos TMDL should include a full OP pesticide screen and a screen for other pesticides that are alternatives.** In order to insure that the ban of residential use of diazinon and chlorpyrifos doesn't lead to a new pesticide problem in Calleguas Creek, the watershed stakeholders should start analyzing water samples for all OP pesticides and for any alternatives (pyrethroids) to diazinon and chlorpyrifos. All water samples collected in the monitoring program should be composite samples. Composite samples provide a more representative of the conditions in the receiving water. Also, the monitoring sections in both TMDLs should specify the MLs for each impairing pollutant. No analytical methods should be used that have MLs above the concentrations used to derive the WLAs and LAs.	A special study will address the issue of replacement pesticides and the monitoring plan will include sampling for replacement pesticides if appropriate. Composite samples will be included in the monitoring plan.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
5.1	County	6/10/05	The proposed TMDL should give allocations for chlorpyrifos and diazinon only; systematic toxicity testing should be used to identify any future toxicants but toxicity units should not be used as targets in the TMDL.	The toxicity target will be incorporated into NPDES permits according to current policy which is to use toxicity exceedances as a trigger to conduct further toxicity testing and TIEs as warranted. It is important to include toxicity as a target as there are several 303(d) listings specifically for toxicity.
5.2	County	6/10/05	If TUc is used as a numeric target, point estimates, rather than hypothesis testing, should be used for calculation of toxic units for chronic toxicity tests	The NOEC method of calculating TUc is used in this TMDL as it is consistent with current Regional Board practice. Notwithstanding the several EPA documents which suggest the IC25 method of calculating TUc, the NOEC method is consistent with USEPA permitting practice.
5.3	County	6/10/05	Diazinon water quality criteria selected as numeric targets are questionable given recent evidence of a transcription error in the development of the criteria.	A review of the data including the correction to the apparent error in the diazinon criteria may result in a revision to the EPA diazinon water quality criteria. Any revisions to the diazinon criteria can be considered by the Regional Board during the implementation period of the TMDL.
5.4	County	6/10/05	Water Code Sections 13241 and 13242 should also be considered for impacts to POTWs.	
5.5	County	6/10/05	The use of an explicit Margin of Safety for chlorpyrifos is not supported.	The water column and sediment linkage analysis has uncertainty and while the analysis uses conservative assumptions, these assumptions are based on literature values, not values derived in Calleguas Creek. Because the assumptions made were reasonable conservative the MOS is only 5%. See also Staff response to internal MOS memos which precede this response to comments.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
6.1	Camrosa	6/10/05	**Margin of Safety** Wasteload Allocations, Page 5: Remove the last sentence of the second paragraph that states "A margin of safety of 5% was included in the targets for chlorpyrifos for discharges to the Calleguas and Revolon subwatersheds." Wasteload Allocations, Page 5, Chlorpyrifos Wasteload Allocations table: Change the Final WLA for Camarillo and Camrosa from 0.0133 to 0.014. Load Allocations, Page 7: Remove the last sentence of the second paragraph that states "A margin of safety of 5% was included for chlorpyrifos for discharges to the Calleguas and Revolon subwatersheds. Load Allocations, Page 7, Chlorpyrifos Load Allocations table: Change the Final Chronic LA for Calleguas and Revolon from 0.0133 to 0.014. Margin of Safety, Page 8: Remove the first paragraph after the bullet that discusses the explicit margin of safety. *"An implicit margin of safety to ensure protection from toxicity due to chlorpyrifos concentrations in sediments exists. As shown in the linkage analysis, attainment of proposed water column target (0.014 ug/L) will ensure attainment of lowest no-effect level of chlorpyrifos in sediments identified in the literature (10 ug/kg)."*	The water column and sediment linkage analysis has uncertainty and while the analysis uses conservative assumptions, these assumptions are based on literature values, not values derived in Calleguas Creek. Because the assumptions made were reasonable conservative the MOS is only 5%. See also Staff response to internal MOS memos which precede this response to comments.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
6.2	Camrosa	6/10/05	**Numeric Targets** Revise the third paragraph to include the following language: If the Regional Board revises NPDES permits or the Basin Plan to use other methods of evaluating toxicity *or if other information supporting other methods becomes available*, the Regional Board may reconsider this TMDL and revise the water toxicity numeric target.	Change made.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
6.3	Camrosa	6/10/05	**Wasteload Allocations** **Revisions to POTW Wasteload Allocations** Revise the title of the Chlorpyrifos Wasteload Allocations table to state "Chlorpyrifos Weekly Wasteload Allocations. In the Diazinon Wasteload Allocations table, revise the headers to read "Interim Daily Acute WLA", "Interim Weekly Chronic WLA", and "Final Weekly WLA." **Revisions to Urban Stormwater Co-Permittees Wasteload Allocations** Revise the title of the Chlorpyrifos Wasteload Allocations table to state "Chlorpyrifos Weekly Wasteload Allocations" **Revisions to Minor Point Sources Wasteload Allocations** Revise the title of the Chlorpyrifos Wasteload Allocations table to state "Chlorpyrifos Weekly Wasteload Allocations" In the Diazinon Wasteload Allocations table, revise the headers to read "Interim Daily Acute WLA", "Interim Weekly Chronic WLA", and "Final Weekly WLA." **Load Allocations** In the Chlorpyrifos and Diazinon Load Allocations tables, revise the headers to read "Interim Daily Acute WLA", "Interim Weekly Chronic WLA", and "Final Weekly WLA."	The Basin Plan Amendment will be revised to clarify that the chronic targets are based on a 4-hour average and that the acute targets are based on a one-hour average. Frequency of monitoring will be addressed in permits or the monitoring plan.
6.4	Camrosa	6/10/05	**Implementation Plan**	Change made.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
			Modify Item 13 in Table 7-17-2 as follows: "Based on the results of Implementation Actions 1-12 and if sediment guidelines are promulgated, reevaluate the TMDL~~s~~ targets, ~~and~~ WLAs and LAs, and implementation schedules if necessary.	
6.5	Camrosa	6/10/05	Insert the following new items in Table 7-17-2: 15. Implementation Action: Special Study # 4 (Optional). Submit a report presenting the results of any special studies or other information that could result in refinement of the TMDL targets, LAs, and implementation schedule. Responsible Party: Agricultural Dischargers Date: 8 years after effective date.	Dischargers can conduct studies as their needs dictate and can petition the Regional Board to consider the new data and conclusions. Therefore, a study which is "optional" does not need to be included in the Implementation Plan.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
6.6	Camrosa	6/10/05	Implementation Action: Special Study # 5 (Optional). Conduct a study to evaluate the use of IC25 rather than NOEC in the calculation of the TUc target to trigger additional studies of the toxicant. Responsible Party: POTWs, Stormwater Permittees, Agricultural Dischargers Date: 8 years after effective date. Implementation Action: Based on the results of Implementation Actions 1-16, the Regional Board will consider revisions to the TMDL targets, load allocations, and schedule for expiration of interim load allocations. Responsible Party: Regional Board Date: 9 years after effective date.	
16.7	Camrosa This comment represents a *"…more appropriate technical approach…" "… not requesting any changes…"*	6/10/05	**Point estimates, rather than hypothesis testing, should be used for calculation of toxic units for chronic toxicity tests.**	See response to comment 5.2, above.
16.8	Camrosa This comment represents a *"…more appropriate technical*	6/10/05	**The toxicity targets should include trigger language.**	The toxicity target will be incorporated into NPDES permits according to current policy which is to use toxicity exceedances as a trigger to conduct further toxicity testing and TIEs as warranted.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
	approach…" "… not requesting any changes…"			
16.9	Camrosa This comment represents a *"…more appropriate technical approach…" "… not requesting any changes…"*	6/10/05	**The current diazinon targets are based on faulty criteria.**	See response to comment 5.3, above.
7.1	VCFB	6/10/05	**TRE/TIE requirements should be consistent with Conditional Waiver Program** The requirement for a TRE/TIE, as is required in NPDES permits when toxicity is triggered by the 1.0 toxicity unit, is not an appropriate requirement for agriculture. The proposed conditional waiver for agriculture would require additional monitoring and possibly a TIE when there is significant toxicity but not a TRE. To ensure consistency with the conditional waiver, we recommend that the trigger mirror that contained in the proposed conditional waiver. Irrigation return flows are exempt from the NPDES permit requirements and must be addressed according to state law only.	The toxicity LAs will be implemented in accordance with US EPA, State Board and Regional Board resolutions, guidance and policy, including whether or not a TRE is required, at the time the waiver is granted.
7.2	VCFB	6/10/05	**Remove explicit margin of safety for chlorpyrifo**s The addition of an explicit margin of safety for chlorpyrifos in the Calleguas and Revolon subwatersheds seems unwarranted. The implicit margin of safety described in the Toxicity Technical Report is adequate to protect all uses. Furthermore, information is not provided in the Tentative Toxicity BPA to support the	The water column and sediment linkage analysis has uncertainty and while the analysis uses conservative assumptions, these assumptions are based on literature values, not values derived in Calleguas Creek. Because the assumptions made were reasonable conservative the MOS is only 5%. See also Staff response to internal MOS memos which precede this response to comments.

Response to Comments
Total Maximum Daily Load for Toxicity, Chlorpyrifos, and Diazinon in Calleguas Creek its Tributaries and Mugu Lagoon
June 10, 2005

No.	Author	Date	Comment	Response
			use of an explicit margin of safety.	
7.3	VCFB	6/10/05	**Averaging periods should be included** The Tentative Toxicity BPA does not indicate what averaging periods should be used to determine compliance with the load allocations. Appropriate averaging periods should be included to avoid any questions later after adoption.	Change made.
7.4	VCFB	6/10/05	**Diazinon numeric targets are based on faulty criteria** The diazinon numeric targets are USEPA criteria that have been found to be the result of calculations that used faulty data. Because of this error, the diazinon water quality criteria are currently under review by USEPA. When the diazinon USEPA criteria is recalculated by removing the faulty data, the recalculated criteria are 0.155 ug/L. As a result of this information, the recalculated criteria should be used as a placeholder numeric target in the Tentative Toxicity TMDL. Finally, a re-opener provision that allows for further adjustments to the diazinon target should be included to account for anticipated changes in USEPA's recommended criteria.	See response to comment 5.3, above.
7.5	VCFB	6/10/05	**Conclusion** In summary, we believe the TMDLs produced through the collaborative process lead by the Regional Board are commendable, and that the process itself will serve as a model for future TMDLs. We support the adoption of these TMDLs with the changes discussed above and look forward to continuing to work with you on the upcoming TMDLs and other issues of mutual interest.	Comment noted.